REMARKS

Initially, Applicant notes that the remarks and amendments made in this response are consistent with those presented to the Examiner during the telephone call of March 24, 2008.

By this paper, claims 1, 3, 4, 9, 10, 20, 21, and 45 have been amended and no claims have been canceled or added such that claims 1-53 remain pending.[1] Claims 1 and 50 are the only independent claims at issue.

The Non-Final Office Action, mailed October 22, 2007, considered and rejected claims 1-53. Claims 1-5, 8-14, 16, 21-38, 40-43, 45-48, and 50-53 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Boucher et al. (US Patent No. 6,334,153), hereinafter Boucher in view of Anand et al. (US Patent No. 6,370,599), hereinafter Anand. Claims 6, 7, 15, 17-20, 39, and 44 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Boucher in view of Anand and further in view of Dwork et al. (US Patent No. 6,963,946), hereinafter Dwork.[2]

Applicant's claimes are generally directed to embodiments for optimizing the offload of network computing tasks by providing for reliably offloading uploading multiple network connections or state objects between a host processor and a destination component processor. The embodiment of claim 1, for example, recites a method in a computerized system comprising a switching layer, and a sequence of one or more intermediate software layers of a network protocol stack, each of the intermediate software layers having a state object. The method is directed to transferring control between one or more destination component devices and one or more source component devices. The control is needed to process a plurality of network connections while still maintaining integrity of established network communication. The method comprises the act of generating an offload data structure that comprises a hierarchy of a plurality of state objects forming an inverted tree structure, wherein the hierarchy corresponds to a plurality of network connections sharing a common path state object, the plurality of state objects also correspond to a network protocol state for one or more intermediate software layers. Two or more state objects corresponding to the plurality of network connections in the same intermediate software layer of the offload data structure are transferred from a source component

[1] Support for the amendments is found throughout the specifications including, but not limited to, the disclosure of pgs. 4 and 22, and 39.

[2] Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

device to a destination component device. The destination component then processes the two or more state objects at the same protocol layer after the transfer.

The only other independent claim, 50, is directed to a computer program product that when executed, performs a method generally corresponding to the method of claim 1.

It will be noted that independent claims 1 and 50 were rejected by in view of a combination of resources, Boucher and Anand. Boucher discloses embodiments for accelerating the processing network communications by creating a fast data path that effectively bypasses network layers and accesses message data directly without processing the headers for each network layer. The fast path of Boucher creates a data structure for individual connections that includes the information that would normally be present in the headers of each for each network layer. The headers can then be extracted or added without having each layer process the packet resulting in less processing overhead. Anand is cited in the rejection of the independent claims as teaching transferring two or more state objects concurrently. It will be noted that both Boucher and Anand disclose only processing large multi-packet messages and are not directed to optimizing the offloaded connections by efficiently offloading multiple connections or states together, as in the presently claimed embodiments.

The combination of Boucher and Anand fail to teach or suggest all of the limitations present within independent claims 1 and 50. For instance, the combination fails to disclose or suggest, at least, the element of generating an offload data structure, the offload data structure comprising a hierarchy of a plurality of state objects forming an inverted tree structure, the hierarchy corresponding to a plurality of network connections sharing a common path state object, the plurality of state objects corresponding to a network protocol state for one or more intermediate software layers. Furthermore, it will also be appreciated that neither Boucher nor Anand can teach this limitation because they do not address offloading multiple network connections at the same time. Instead, they are generally addressing only offloading large multi-packet connections.

Within the most Office Action, the Office relies on the disclosure of a communications control block (CCB) within Boucher as teaching the offload data structure. However, as previously discussed, this cited disclosure of Boucher specifically states that the CCB describes a particular (single) connection. (see column. 5, lines 36-43). The data structure defined in claim 1, on the other hand, consists of a **plurality of network connections**. Furthermore, the data

structure is defined as an inverted tree with the hierarchy corresponding to a plurality of network connections. By transferring control using this hierarchical structure, the current invention is able to take advantage of the offload using a minimal amount of resources. By reducing the resources of the offloading, the present invention allows the offload of connections that would other wise be determined to be inefficient for offload.

In the rejection of dependent claim 45, the Office Action cites Bouchard as teaching an inverted tree offload structure. However, the inverted tree described in Boucher is describing a process for comparison of incoming packets and the CCB. The CCB itself is not a tree structure and therefore the claim elements are not met. Furthermore, the disclosed tree structure is not related to a common path as required by the claims. While Anand is introduced by the Examiner to compensate for the deficiencies of Bouchard, Applicant respectfully notes that Anand fails to disclose the inverted tree or multiple network connections. Instead, Anand discloses the offloading a plurality of tasks corresponding to a single network packet, see column 4, lines 40-50.

Dependent claim 10 contains further claim elements not present within the cited art. In claim 10, specific state objects are being transferred. Specifically, if the state object is a delegated state, the state is transferred back to the source component. However, if the state object is a cached state, then the object is not transferred back to the source in order to conserve resources. Such elements are not addressed within the cited art. The Office Action cites Boucher as teaching a similar element in column 5, lines 56-67. However, the referenced section of Boucher fails to address the different states as provided in the claims.

Furthermore, with regard to the rejection of dependent claim 9, while the Office Action states it would be obvious to combine the additional peripheral devices of Anand with the INIC of Boucher, Applicant respectfully submits that the mere statement within Anand that multiple peripherals can be queried and capabilities determined does not teach the specific claim language of detecting a different one or more peripheral devices that are capable of handling processing control of the one or more links by receiving the one or more offload data structures and control of the one or more state objects. This claim element requires that another peripheral device be found that is capable of receiving the one or more offload data structures and control of the one or more state objects in order to handle the processing of the links. Merely querying the capabilities of devices fails to teach or suggest that specific capabilities are being queried.

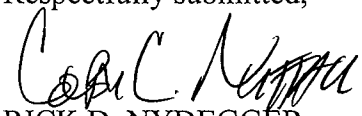
Without at least these limitations as recited in combination with the other claim elements, Applicant respectfully submits that dependent claim 9 and its related dependent claims are patentable over the combination of Boucher and Anand.

The other cited art of record also fails to compensate for the foregoing inadequacies of Boucher and Anand. Accordingly, in view of the foregoing, Applicant respectfully submits that all of the independent claims are allowable, such that all of the other rejections to the claims (including the dependent claims) are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicant specifically requests that the Examiner provide references supporting the teachings officially noticed, as well as the required reason as to why one of ordinary skill in the art would have modified the cited references in the manner officially noticed.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at 801-533-9800.

Dated this 21st day of April, 2008.

Respectfully submitted,



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